

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)



(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/011422	International filing date (day/month/year) 08.10.2004	Priority date (day/month/year) 24.10.2003	
International Patent Classification (IPC) or national classification and IPC A23L1/24, A23D7/01, A23D7/02, A23D7/015			
Applicant UNILEVER N.V. et al			

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 13.06.2005	Date of completion of this report 19.12.2005
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Rooney, K Telephone No. +31 70 340-3931 

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**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/011422

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-12

as originally filed

Claims, Numbers

1-15

received on 13.06.2005 with letter of 13.06.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/011422

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-15
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/EP2004/011422

Re Item V

1 Reference is made to the following documents:

- D1: US-A-5 011 701 (BAER ET AL) 30 April 1991 (1991-04-30)
- D2: EP-A-0 477 827 (CPC INTERNATIONAL INC) 1 April 1992 (1992-04-01)
- D3: WO 03/053149 A (UNILEVER N.V; UNILEVER PLC; HINDUSTAN LEVER LIMITED; FARRER, DONALD; F) 3 July 2003 (2003-07-03)
- D4: EP-A-0 757 895 (HERCULES INCORPORATED) 12 February 1997 (1997-02-12)

2 Inventive Step

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 10 and 13 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D3 discloses compositions suitable for producing edible emulsions (dressings) which comprise oil, water, dairy bases such as milk protein or buttermilk, emulsifiers such as casein, thickeners and insoluble fruit fibre (e.g. Herbacel). The compositions are produced by mixing the above ingredients and recovering the emulsions (see D3: page 10, paragraph 3 - page 17, paragraph 3). Although this document does not disclose the range of sizes of the oil droplets, it seems that this range is merely an arbitrary selection from values already existing in the prior art especially since forming small oil droplets (c. 10 micron size) would be considered an obvious solution to the problem of making a smooth emulsion.

3 Dependent claims

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 2-9, 11, 12, 14 and 15 does not involve an inventive step in the sense of Article 33(3) PCT.

The above claims refer to ingredient items and ranges, emulsion droplet distributions, viscosity and homogenisation conditions which are standard practice and known to those skilled in the art (see D1-D4: the whole documents).

Claims

1. An edible emulsion comprising:

- 5 a) oil;
 b) water;
 c) a viscosity-building emulsifier that at 2.0% by weight is partially or completely not soluble in acidified deionized water having a pH of ≤ 5.5 or a viscosity-building emulsifier that is at least about 50.0% by weight protein, or both
 d) from about 0.1 to about 1.0% by weight of the insoluble fruit fibers; and
 10 e) thickener

wherein the edible emulsion is smooth and at least one of the viscosity-building emulsifiers is added as part of a dairy base and wherein at least about 80.0% of all oil droplets present are less than 10.0 μm .

- 15 2. The edible emulsion according to claim 1 whereby the dairy base is selected from the group consisting of yoghurt, crème fraîche, sour cream, cream, mixtures thereof.

3. The edible emulsion according to any one of the preceding claims wherein the edible emulsion comprises from about 7.5 to about 85.0% by weight oil.

- 20 4. The edible emulsion according to any one of the preceding claims wherein the insoluble fruit fibers are recovered from tomatoes, peaches, pears, apples, plums, lemons, limes, oranges, grapefruits or mixtures thereof.

- 25 5. The edible emulsion according to any one of the preceding claims wherein the insoluble fruit fibers comprise citrus fruit fibers.

6. The edible emulsion according to any one of the preceding claims wherein the edible emulsion comprises from about 0.5 to about 12.0% by weight emulsifier.

- 30 7. The edible emulsion according to claim 7 wherein the emulsifier is a mixture of emulsifiers comprising from about 0.1 to about 2.5% by weight viscosity-building emulsifier.

- 35 8. The edible emulsion according to claim 8 wherein at least one emulsifier in the mixture of emulsifiers has an HLB of greater than about 8.0.

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9. The edible emulsion according to claim 1 wherein the thickener is a food grade starches, pectin, gums or mixture thereof.

5 10. A method for making an edible emulsion according to any one of the preceding claims comprising the steps:

- a) mixing, in no particular order, oil, water, insoluble fruit fiber, thickener and emulsifier to make a coarse emulsion; and
- b) recovering the coarse emulsion

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wherein the coarse emulsion may optionally be homogenized in a homogenizer to produce a smooth emulsion.

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11. The method for making an edible emulsion according to claim 10 wherein the coarse emulsion is homogenized in a homogenizer and the homogenizer is pressurized from about 35.0 to about 650.0 bar and at a temperature from about 15°C to about 70°C.

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12. The method for making an edible emulsion according to claim 11 whereby the homogenization is carried out in two or more separate homogenization steps.

13. The food product comprising an edible emulsion according to any one of the preceding claims wherein the food product is a dressing, soup, sauce, dip, spread, filling or drink.

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14. The food product according to claim 13 wherein the food product has a viscosity greater than about 500 centipoise and less than about 10,000 centipoise.

15. The food product according to claim 14 wherein the food product comprises 0.8% by weight or less starch.